

CLAIMSWhat Is Claimed Is:

- 5 1. A fixative for ink-jet printing, said fixative for underprinting or overcoating, or both, at least one ink printed on a print medium, said fixative comprising a one-part system and comprising a polymer in a vehicle, said polymer selected from the group consisting of vinyl-based polymers, condensation polymers, and copolymers thereof, said polymer having a glass transition temperature within a range of -50° to +100°C, a
10 melting temperature within a range of 30° to 150°C, and a molecular weight (weight average basis) within a range of 3,000 to 100,000, said fixative contained in a separate cartridge from said at least one ink-jet ink print cartridge.
2. The fixative of Claim 1 wherein at least three color inks are provided.
- 15 3. The fixative of Claim 2 wherein said at least three color inks are cyan, yellow, and magenta.
4. The fixative of Claim 2 wherein three color and one black ink are provided.
- 20 5. The fixative of Claim 1 wherein said polymer is selected from the group consisting of (a) acrylic and methacrylic acids and salts thereof, (b) esters of acrylic and methacrylic acids, (c) amides of acrylic and methacrylic acids, (d) hydroxy amides of acrylic and methacrylic acids, (e) polyethylene glycols and esters of acrylic and methacrylic acid, (f) polyalkylene glycols and esters of acrylic and methacrylic
25 acid, (g) sulfoalkyl(aryl) acrylate and methacrylate, and salts thereof, (h) polyalkylene (aryl) glycol diacrylates and dimethacrylates (i) triacrylates, trimethacrylates, tetraacrylates, and tetramethacrylates (j) styrene and its derivatives, (k) vinyl esters and alcohols, (l) vinyl ethers, (m) diallyldialkyl ammonium halides, (n) vinyl sulfonic acid and
30 salts thereof, (o) N-vinylamides, (p) polyunsaturated betaines, (q) polyunsaturated sulfo-betaines, (r) polyunsaturated amine oxides, (s) polyunsaturated fatty acids, (t)

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polyethylene oxide alkyl alkyenyl phenols, (u) polyalkylene and polyaryl glycol diacrylates and dimethacrylates, (v) polyalkylene and polyaryl divinyl ethers, (w) trimethylolpropane triacrylates and trimethacrylates, (x) alkoxyated trimethylolpropane triacrylates and trimethacrylates, (y) glycerol triacrylates and trimethacrylates, (z) alkoxyated glycerol triacrylates and trimethacrylates, (aa) pentaerythritol tetraacrylates and tetramethacrylates, and (ab) alkoxyated pentaerythritol tetraacrylates and tetramethacrylates.

6. The fixative of Claim 5 wherein said polymer is selected from the group consisting of allyl methacrylate, allyl acrylamide, N-vinyl carbazole, N-vinyl pyrrolidone, vinyl imidazole, vinyl pyridine, 1,4-diisocyanatobenzene, toluene diisocyanate, 4,4'-methylenebis(phenyl isocyanate), polymethylene poly(phenyl isocyanate), dicyclohexylmethane diisocyanate, and 1,4-cyclohexane diisocyanate.

7. The fixative of Claim 1 wherein said polymer has a concentration in said vehicle within a range of about 2 to 30 wt%.

8. The fixative of Claim 7 wherein said concentration is within a range of 3 to 10 wt%.

9. The fixative of Claim 1 wherein said molecular weight is within a range of about 5,000 to 20,000.

10. A fixative for ink-jet printing, said fixative for underprinting or overcoating, or both, at least one ink printed on a print medium, said fixative comprising a two-part system and comprising (1) a reactive monomer or oligomer in a vehicle, said reactive monomer or oligomer selected from the group consisting of isocyanates and epoxy-terminated oligomers and (2) at least one second component selected from the group consisting of polyols, polyvinyl alcohols, and base catalysts, said reactive monomer or oligomer contained in a separate cartridge from said at least one ink-jet ink print cartridge and said at least one second component contained in said at least one ink-jet ink

print cartridge, said reactive monomer or oligomer reacting with said at least one second component on said print medium to form a polymer, said polymer having a glass transition temperature within a range of -50°C to $+100^{\circ}\text{C}$ and a melting temperature within a range of 30°C to 150°C .

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11. The fixative of Claim 10 wherein at least three color inks are provided.

12. The fixative of Claim 11 wherein said at least three color inks are cyan, yellow, and magenta.

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13. The fixative of Claim 11 wherein three color inks and one black ink are provided.

14. The fixative of Claim 10 wherein said monomer or oligomer has a concentration in said vehicle within a range of about 2 to 30 wt%.

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15. The fixative of Claim 10 wherein said concentration is within a range of 3 to 10 wt%.

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